

12. Polynema bifasciatipenne (Girault).*Stichothrix bifasciatipennis* Girault.

Psyche, XV, 1908, pp. 115-117. (U. S.)

A large number of the species of this genus are poorly described; as a matter of fact it is difficult to distinguish the species in this genus without mounting them in balsam and studying the characters afforded by the fore wings, their relative shape and size and the amount and quality of their discal ciliation; there are also other good sculptural characters on the metathorax, but coloration is too variable for specific characters in most instances.

**DESCRIPTIONS OF SOME NEW HEMIPTERA-
HETEROPTERA.**

BY H. G. BARBER,

ROSELLE PARK, N. J.

***Jalysus elongatus*, new species.**

Longer than *J. spinosus* Say, pale ochraceous in color. Head twice as long as broad, armed at vertex with a long, acute, cylindrical spine which usually projects horizontally beyond apex of head. This spine in a few cases is deflexed at apex. Post-ocular part of head much longer than in *spinosus*, as long as the width of the anterior margin of the pronotum; area back of the transverse groove smooth; a longitudinal, smooth, callosed line just above the eyes. Head beneath with a series of fine punctures beside the buccal groove and with a smooth pale-yellow, callosed line running from beneath the eyes to the anterior edge of the pronotum, suffused with a light piceous streak either side of this line. First joint of rostrum three fourths as long as head. Antennæ similar in character and color to *spinosus* but with the apical joint relatively narrower. Pronotum over twice as long as wide, closely and coarsely punctate dorsally and laterally except on the two oval cicatrices and on the three longitudinal callosed ridges which are arranged as follows: lateral ones, distinct from anterior margin to rounded humeral elevations, median carina not elevated behind, evanescent before posterior declivity. Spine of scutellum depressed, almost horizontal. Clavus and subclaval area of hemelytra punctate, these verging posteriorly into shallow areoles; remainder of hemelytra and membrane transversely rugulose between the prominent nervures and there subhyaline. Very acute and prolonged apex of corium reaching well beyond middle of membrane, not tipped with black. Abdomen beneath impunctate, unicolorous in ♀ and reddish brown in ♂. Pleural pieces of meso- and metasternum coarsely and closely punctate. Metapleural spines relatively shorter

and not quite so acute as in *spinosus*. Legs similar to those of *spinosus*, with apex of hind femora passing apex of abdomen; tarsi fuscous. Length of ♂'s, 9 mm.; ♀'s, 9-10 mm.

Described from seven males and twelve females collected by me in the Huachuca Mountains, Arizona, in August, 1905.

The meager description of *Ncides caducus* by Distant (Biol. Cent. Am. Rhynch., I, Append., p. 460, 1893) from Mexico, answers so far as it goes for this species and it may turn out upon comparison with the type to be Distant's species.

The three United States species of the genus *Jalysus* Stål may be differentiated as follows:

Scutellar spine not vertically elevated.

Head armed with a long, horizontal, sharp, cylindrical spine, surpassing apex of head. *elongatus* n. sp.

Scutellar spine elevated vertically.

Vertex of head armed with a short, erect, blunt spine. Scutellar spine almost vertical. *multispinosus* Ashm. (*perclavatus* Van D.).

Vertex of head unarmed with a spine but provided with an abruptly ending sharp keel. Scutellar spine inclined at an angle of 45°.

spinosus Say (*wickhami* Van D.).

Jalysus (Hoplinus) multispinosus Ashm. is the smallest member of the genus thus far described and seems to be widely distributed. It was described by Mr. Ashmead from Florida and, owing to his poor characterization, was recently redescribed from Florida material by Mr. Van Duzee as *perclavatus*. I have taken this species in Langdon, Mo., Huachuca Mountains, Ariz., and Lakehurst, N. J. Mr. Nathan Banks has taken it about Washington, D. C. *J. spinosus* is widely distributed, as I have specimens from Dilly, Oregon, Inyo Mountains, Calif., Nebraska, and from numerous points in the east, where it is common. *J. Wickhami* Van D. is a small *spinosus*, specimens of which I have received from Mr. Wickham collected in the Inyo Mountains, Cal. Mr. Van Duzee has compared my specimens with his type and agrees to have no quarrel with me if I place his species as a synonym of *spinosus*, although he prefers to call it a variety.

Sphærobolus quadristriata, new species.

Black, head and anterior lobe of prothorax shining, these impunctate, minutely wrinkled but not setose as in *insignis* Uhl. and considerably larger than that species. Projecting tylus reaching two thirds the length of the basal

joint of the antennæ. Head but little exerted and narrowing rather sharply behind the eyes. Antennæ piceous with apex of third joint and fourth infuscated; the second joint one third longer than third, fourth three fourths as long as third. Head beneath impunctate, minutely wrinkled with apex of basal joint of rostrum about reaching base of head. Pronotum provided with a distinct but narrow callosed collar which is dull piceous; anterior lobe is a trifle wider than long and two and one half times as long as the posterior lobe, which is flattened and dull piceous, rather finely but not closely punctate; humeral angles elevated, smooth and slightly paler; sinus of constriction, at side especially, not sharp angled as *insignis* but more rounded at bottom and there suffused with dull black. Scutellum dull sooty black, narrow, acute, almost impunctate and extreme tip pale; posteriorly subcarinate. Corium dull fuscous or sooty black, not setose or hairy, with four smooth dirty white striæ, converging towards the base, arranged as follows: one on the outer margin of the clavus, extending two thirds its length, one just outside the clavus, extending a little longer and two of equal length between exterior vein and costal margin, reaching a little behind middle of corium. Just before apex of corium and not attaining costal margin, a triangular impunctate pale spot. Infuscated part of clavus and corium with a few punctures arranged somewhat in linear series. Corium abbreviated, membrane extending just past middle of fifth abdominal segment. Membrane fuscous, with basal interior angle and minute spot at external angle, pale; extreme tip transversely pale, with veins indistinct. Beneath black, with meso- and metapleural pieces dull, these next the coxæ and the posterior concave lateral margins of metasternum pale; the propleura very finely and sparsely punctured, shining. Venter subshining but covered with very fine closely appressed, grayish pubescence. Legs piceous brown, paler at base of coxæ, femora and tarsi. Thickened anterior femora provided on apical half with two or three stronger and several intermixed, smaller teeth. Tibiæ furnished with stiff bristles. Length of ♂, 7.5 mm.

Described from three males taken at Lakehurst, N. J., by Mr. Wm. T. Davis and myself on July 4, 1909, and September 7. It seems to be rare. I have seen this in collections labelled *S. insignis* Uhl, which is, however, a strictly western species, specimens of which in my collection are from Spearfish, S. Dak., and Glen, Sioux Co., Nebr.

PSEUDOCNEMODUS, new genus.

Very similar and with many of the characters of *Cnemodus* H. Schf. from which it chiefly differs by the presence of ocelli; post-ocular margins of head more swollen; collar of pronotum narrower and not so sharply demarked; posterior lobe of pronotum wider than anterior; fore femora more incrassate, basal part of fore tibiæ in male above spine nearly straight, with this spine nearer apex than

base of tibiae; middle femora of males provided with four or five strong teeth; anterior lobe of pronotum punctate. Head and pronotum provided with a few long setae. Posterior margin of pronotum not so sinuated above base of scutellum.

***Pseudocnemodus bruneri*, new species.**

Smaller and more shining than *Cnemodus mavortius* Say. Dark castaneous, with post-ocular margins of head more swollen and with fore femora more incrassate. Head dull dark castaneous, closely punctured, not pubescent but provided with a few long setae. Tylus lighter colored. Head shaped much as in *mavortius* but the post-ocular and ante-ocular portions to base of antennae subequal. Swollen post-ocular part distinctly wider across than the collar of the pronotum. Apex of head almost reaching the middle of basal joint of antennae, which is about two thirds as long as second: third segment apically thickened and apical three fourths fuscous, about three fourths the length of second; fourth segment a trifle longer than third and colored reddish-brown. First joint of rostrum nearly reaching base of head. Head unicolorous beneath, subshining, with a few fine scattered punctures. Collar of pronotum short and not sharply demarked, there closely punctured. Anterior lobe shining, with scattered punctures on the disc, a little longer than wide and about two and one half times longer than the posterior lobe, which is dull paler castaneous, more closely punctate and wider than the anterior lobe. Humeral angles callosed, smooth, pale. Seen from the side, the posterior part of this lobe is elevated to the height of the anterior lobe. Posterior margin of pronotum not so concave as in *C. mavortius*. Scutellum dark castaneous or piceous, not closely punctate, pale at acute apex and with apical half distinctly keeled. Corium wider than the abdomen, dark castaneous, verging to piceous in dark specimens, not closely punctate except without exterior vein, not very shining. Wide costal margin strongly reflexed, pale yellow, impunctate. Membrane incomplete, infuscated, reaching base of sixth abdominal segment, provided with about four sinuous veins. Genital segment of male seen dorsally more concave than in *C. mavortius*. Pleural pieces rather closely and coarsely punctured, shining. Exterior apical angle of metasternum and coxal plates pale stramineous. Venter shining castaneous, with very fine hairs on the disc. Connexivum beneath paler. Legs shorter than in *C. mavortius*, pale stramineous, with shining anterior femora relatively shorter and more swollen, and provided with two rows of five or six larger equidistant spines, with a few minute ones nearer apex. Fore tibial spine of male placed nearer apex than base of tibia, the basal part nearly straight. Middle femora of male armed with three or four stout, acute teeth. Precoxal tooth acute, horizontal. Hind femora unarmed. Apical half of fore femora and tibiae, apex of second and third femora more faintly fuscous. Length of ♂, 5.5 mm.; ♀, 6 mm.

Described from fourteen males and fifteen females collected by me in Falls City, Nebraska, August 30, 1910; two females taken by

Mr. William T. Davis at Lakehurst, N. J., July 11. and one female in the collection of Mr. Nathan Banks from Black Mountain, N. C., May. The specimens from Falls City, Nebr., were collected under old railroad ties which had been lying along the grassy embankment of the road for three or four weeks, beneath which the vegetation was not yet dead. A few of the specimens are much darker, verging into piceous. The two females from Lakehurst, N. J., are larger and paler than the Nebraska and Black Mountain ones, with the antennæ and legs not infuscated. I have named this species for my friend Professor Lawrence Bruner, State Entomologist of Nebraska, to whom I am much indebted for past favors.

ESURIS Stål.

As this genus is new to the United States, it may be well to give its chief diagnostic characters, which are as follows: species small, having the hemelytra incomplete and destitute of a membrane, with the clavus and corium connate. Anterior femora incrassate and armed beneath with a few small teeth. Body sparsely setose. Ocelli absent.

This genus was erected by Stål (Enum. Hem., IV, 164, 1874) to include his formerly described *Rhyparochromus tergina* from Brazil, since which time Distant (Biol. Cent. Am. Rhynch., I, 410, 1893) has described a species, *E. purpurata*, from Guatemala, but the description is so incomplete that it will be difficult to fix it without an examination of the type.

Esuris castanea, new species.

Castaneous, rather thickly grayish hirsute, subshining, with posterior margin of pronotum and corium paler. Membrane entirely missing. No veins on the corium and clavus not differentiated. Head, pronotum and corium transversely convex.

Head large, not at all exerted, about as wide as the pronotum at posterior margin, closely and coarsely punctured. Fore part of head very declivous, with the tylus almost vertical. Two long setæ are placed next the eyes on the lateral margins of head. Antennæ pale ochraceous, unicolorous, short setose, basal joint attaining apex of head, second and fourth subequal, third a trifle shorter. First joint of rostrum nearly reaching base of head. Pronotum without a collar, anterior margin straight, the whole surface closely and coarsely punctate, finely grayish hirsute; the narrow posterior margin pale and almost straight across. The pronotum is a trifle wider than long and is widest one third of its length from the anterior margin, slightly narrowing posteriorly to be obtusely and very shallowly constricted one sixth its length from the

posterior margin: anterior lateral margins lightly carinated. Scutellum equilateral, convex dorsally, color of pronotum, anteriorly at least, closely and finely punctured. Hemelytra lighter castaneous and wider across than the pronotum, wider than the abdomen, with very narrow lateral margins slightly deflexed, at least anteriorly, over the connexivum. Line of meeting of the two hemelytra straight, about twice as long as scutellum, posterior narrowly pale, smooth margins very slightly oblique, with the interior angle obtuse, outer obtuse angle reaching apex of fourth abdominal segment. Membrane entirely absent. Corium and clavus united. Veins of corium absent. Hemelytra provided with small, closely set punctures, arranged in linear series, each puncture provided with a minute gray hair, making the whole surface appear minutely hirsute. Abdomen dorsally shining, dark, castaneous. Connexivum reflexed, unicolorous. Beneath castaneous, abdomen usually darker and more shining. Pleural pieces finely and rather closely punctate. Femora castaneous. Tibiæ and tarsi pale ochraceous. Anterior femora much thickened, armed beneath with three or four small teeth. Length, ♂'s and ♀'s, 2 mm.

Described from ten males and twelve females collected by me near the Huachuca Mountains, Ariz., where they were very common under dried cow chips.

ARAPHE H. Schf.

Japetus Distant, Biol. Cent. Amer. Rhynch., I, 227, 1883.

After carefully studying Distant's description of his genus *Japetus* I am convinced that it is synonymus with *Araphe* H. Schf., for the characters given by Distant do not generically differentiate this genus. Furthermore, an examination of the new species, here described, shows that it is closely related to *J. spheroides* Dist. from Guatemala and yet without any doubt belongs to the genus *Araphe*.

The United States species of this genus may readily be separated by the following synoptic table:

Head, pronotum and legs long pilose.

Head and thorax coarsely punctate.....*carolina* H. Schf.

Head and thorax impunctate, membrane wanting.....*cicindeloides* Walk.

Head and pronotum not hairy, head impunctate.....*mimetica* n. sp.

Araphe mimetica, new species.

Black, much resembling *A. cicindeloides* Walk. but is considerably smaller. Head and pronotum devoid of long pile but face provided with minute appressed cinereous pubescence, with a few longer hairs at tip of tylus. Head globose, impunctate, finely rugulose and seen from above not so convexed behind the eyes as in *cicindeloides*, much wider than the pronotum. Rostrum reaching fore coxæ: first segment as long as the ante-ocular part of head. Antennæ with two or three short setæ at apex of joints, the first joint

longer than the others and reaching far beyond apex of the head, second joint three fourths the length of the first and a third longer than the third, fourth a trifle longer than the second. Pronotum much narrower than the head, with the anterior lobe globose, covered with very finely closely appressed tomentose, cinereous pubescence similar to that on the face. The velvety black, flattened, posterior lobe is about one half the length of the anterior and scarcely wider. The transverse furrow between the two lobes obtusely rounded at bottom and there provided with a few scattered black punctures. Scutellum, clavus and corium velvety black, not pilose. Scutellum narrow, acute, impunctate. Corium wider than the abdomen, with basal half and exterior apical angle pure white; subcostal area with a row of unicolorous coarse punctures. Membrane smoky black, crossed at base with a broad curved white band; tip of membrane reaching middle of fifth abdominal segment, seen dorsally, symmetrically rounded, reflexed. Apex of male genital segment, seen dorsally, symmetrically rounded. Wings aborted. All beneath and legs shining black. Pleural pieces, venter and legs with more or less appressed, tomentose, cinereous pubescence. Exterior apical angle of metasternum white. Fore and middle tarsi fulvopiceous. Fore femora thickened, provided with one or two very small subapical teeth. Length, ♂ 5.5 mm.; ♀ 7 mm.

Described from sixteen males and seven females collected by me in the Huachuca Mountains, Arizona. These were found very common in company with *A. cicindeloides* running about among the dead leaves beneath the trees, imitating very closely, especially in their larval and nymphal condition, some of the numerous black ants.

Alydus rufescens, new species.

Relative proportions the same as a narrow *eurinus* but somewhat smaller than that species, to which it is closely related. General color of head and anterior one third of pronotum and scutellum dull black. Posterior two thirds of pronotum and hemelytra fulvous, tinged with pink and provided with fine fuscous punctures and in the darker specimens these parts suffused with fuscous. Bronzy black beneath, with lateral margins of the venter to beyond the stigmata rufescent. Head with a few short scattered hairs on the face; transocular width equal to that of the pronotum. Collum in the center, over twice the width longitudinally of the sharply demarked collar of the prothorax. Rostrum and antennae similar to those of *eurinus*. Pronotum with finely but distinctly impressed lateral margins pale, with punctures finer and not so closely set as in *eurinus* and a narrow, median, longitudinal black line running from the blackened anterior portion almost if not quite to the posterior margin. Surface almost devoid of pile or hairs. Humeral angles rounded, not prominent. Scutellum velvety black, with an acute, pale apex and a few large punctures in the surface, more abundant laterally. Corium fulvous-brown, non-pilose, with its extended acute apex extending to middle of membrane, which is sooty brown. Veins are but little branched. Abdomen dorsally bright red, with the sixth segment black. Beneath with head and thorax somewhat

shining, the former almost smooth; the latter, for the most part, coarsely punctate. Venter dull bronzy black, provided with scattering, pale, appressed hairs, intermixed with which are some longer setæ. Lateral margins to beyond the stigmata rufescent. Occasional specimens have traces of red on the disc of the venter, especially anteriorly. Individuals also occur which have the lateral rufescent band broken up, leaving a spot at each incisure, red. Melanic individuals occur which have the pronotum and hemelytra infuscated all over. Legs with femoræ black, almost devoid of pile, a few short, stiff hairs on the tibiæ. Tibiæ are pale except at extreme base and apex. Basal two thirds of tarsi pale. About four long spines on the hind femora, with two short, blunt subapical teeth. Length of ♂, 10 mm.; ♀, 11 mm.

Described from twenty-five males and five females collected by me in the Huachuca Mountains, Arizona, in 1905. They were observed on the hillside of a canyon, flying about among the dead leaves and on the bare ground beneath the stunted oak trees. They presented a very peculiar appearance as they flicked their wings, exposing the bright red abdomen, and behaving very much as some of the Mutillidæ do.

- 1 (2). Lateral margins of pronotum callosed, impunctate, pale. Humeral angles of pronotum acute.....*pilosulus* H. Schf.
- 2 (1). Lateral margins of pronotum thinly impressed, rarely pale. Humeral angles obtuse or rounded.
- 3 (4). Membrane pale, spotted with brown. Hairs sparse on the pronotum. Scutellum velvety black, with smooth, callosed, rounded apex.
conspersus Mont.
- 4 (3). Membrane usually dark, not spotted with brown. Scutellum pale, acute, not specially callosed.
- 5 (6). With nervures of membrane somewhat anastomosing. Hind femora provided with a pale annulus before apex.
scutellatus Van D.
- 6 (5). With nervures not anastomosing and but little branched.
- 7 (12). Pronotum coarsely punctate, usually black or bronze black species.
- 8 (11). Abdomen beneath bronze black. Connexivum with pale spots at incisures.
- 9 (10). Head, pronotum and legs furnished with rather close set, long pile.....*eurinus* Say.
- 10 (9). Head, pronotum and legs furnished with shorter and sparser hairs. Form more robust. *pluto* Uhl.
- 11 (8). Abdomen beneath pale. Hind coxæ set further apart than in *eurinus*.....*setosus* Van Duz.
- 12 (7). Pronotum more finely punctate, fulvous brown. Abdomen beneath bronze black, with ventral margin, broadly rufescent.
rufescens n. sp.

I have never seen specimens of Van Duzee's two species and the diagnostic characters are taken from his description. *A. pluto* Uhl., if a distinct species, is difficult to characterize except with comparison to *A. curinus*. I have seen *A. conspersus* Mont. confused in collections with *Tollius curtulus* Stål, which I have taken at Kingsbridge, N. Y.

A GENERIC SYNOPSIS OF THE ITONIDÆ.

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As there is no complete synopsis of this group, better known as the Cecidomyiidae, extant we take this opportunity of presenting, in a summary form, the results of our studies of American species, many of the types of European genera and a close examination of the literature describing other forms.

Subfamily LESTREMIINÆ.

Small, dark brown or black species. Tarsi quinquearticulate, the first segment longer than the second; fourth vein usually present, forked, or simple; crossvein distinct; antennæ moderately developed or greatly reduced; circumfili never present.

Tribe LESTREMINARIÆ.

This tribe is distinguished from the following by the fourth vein being forked.

Genus CATOCHA Halid. 1833, type *C. latipes* Halid.

Costa continuous and extending beyond the apex of the wing. Antennæ with 11 or more segments, the second not plainly enlarged. Synonyms: *Furcinerva* Rond. 1846 in part, *Macrostyla* Winn. 1846. Europe, North America.

Genus LESTREMIA Macq. 1826, type *L. cinerea* Macq.

Costa not attaining the apex of the wing, practically disappearing at its union with the third vein. Male with 16, female with 11 antennal segments, the second not plainly enlarged. Synonyms: *Cciodogona* Loew 1844; *Furcinerva* Rond. 1846 in part; *Mimosciara* Rond. 1846; *Yposatawa* Rond. 1856; *Molobræa* Rond. 1860. Europe, North and South America, Australia.